

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-25 (cancelled).

Claim 26 (currently amended): The method according to claim 1 ~~46~~, wherein the magnetisable ~~material includes~~ particles comprise elemental iron (Fe), or a compound thereof, or a chromium compound, or a combination thereof.

Claim 27 (cancelled).

Claim 28 (currently amended): The method according to claim 27, wherein the iron compound is an iron salt is selected from the group consisting of: magnetite (Fe_3O_4), maghemite ($\gamma\text{Fe}_2\text{O}_3$), and greigite (Fe_3S_4), ~~or any combination and combinations~~ thereof.

Claim 29 (currently amended): The method according to claim 26, wherein the chromium compound is ~~a chromium salt~~ chromium oxide (CrO_2).

Claim 30 (cancelled).

Claim 31 (currently amended): The method according to claim 1 ~~46~~, wherein the ~~magnetic magnetisable~~ material comprises particles ~~comprising~~ comprise a magnetic core with a biocompatible coating.

Claim 32 (currently amended): The method according to claim 31, wherein the ~~particle has~~ particles have a core and a silica shell enveloping the core.

Claims 33-35 (cancelled).

Claim 36 (currently amended): The method according to claim 1 ~~46~~, wherein the magnetisable ~~particle has~~ particles have a mean size of 5000 nm or less.

Claim 37 (currently amended): The method according to claim 36, wherein the magnetisable ~~particle has~~ particles have a mean size of from 1 nm to 5000 nm.

Claim 38 (cancelled).

Claim 39 (currently amended): The method according to claim 1 ~~46~~, wherein the magnetisable ~~particle is~~ particles are tagged with one or more specific antibodies or protein binding motifs which recognise a cellular element within the cell.

Claim 40 (currently amended): The method according to claim 39, wherein the ~~specific antibodies or protein binding motifs~~ cellular element is a transmembrane extracellular matrix molecule, a transmembrane adhesion molecule, ~~or~~ a dispersed membrane adhesion protein or an extracellular matrix protein.

Claims 41 and 42 (cancelled).

Claim 43 (original): The method according to claim 40, wherein the transmembrane adhesion molecule is an integrin, cadherin, selectin, or immunoglobulin.

Claim 44 (cancelled).

Claim 45 (original): The method according to claim 40, wherein the dispersed membrane adhesion protein is RGD (arginine-glycine-aspartate).

Claim 46 (currently amended): ~~The A~~ A method of treating a patient suffering from a disorder involving an ion channel comprising:

administering to the patient magnetisable particles, wherein the magnetisable particles associate with an ion channel of a cell of the patient; and

manipulating the ion channel ~~channels or cells~~ using a magnetic field external to the patient, thereby treating the disorder, wherein the magnetic field is a constant field or is a variable field with a frequency of 0.1 HZ to 10 Hz.

Claim 47 (currently amended): The method of claim 2 46, wherein the method ~~is a method of comprises~~ destroying cells or inhibiting cell growth.

Claim 48 (currently amended): The method of claim 2 46, wherein the method ~~is a method of comprises~~ inducing osmotic shock to a cell.

Claim 49 (previously presented): The method of claim 46, wherein the cell is a tumor cell.

Claim 50 (cancelled).

Claim 51 (original): The method of claim 47, wherein cells are destroyed or cell growth inhibited by holding ion channels open with a targeted static magnetic field.

Claim 52 (original): The method of claim 47, wherein cells are destroyed or cell growth inhibited by cyclically opening and closing ion channels with a targeted, time-varying magnetic field.

Claim 53 (currently amended): The method of claim 47 46, wherein the ~~method is a method of treating a disorder involving~~ involves a tissue with ion channels that participate in normal cellular homeostasis.

Claim 54 (original): The method according to claim 53, wherein the cells are cardiac muscle cells.

Claim 55 (original): The method according to claim 53, wherein the disorder is hypertension.

Claim 56 (currently amended): The method according to claim 53, wherein the disorder requires
~~method is a method of~~ pain relief.

Claims 57 and 58 (cancelled).

Claim 59 (currently amended): The method of claim 46, wherein the ~~method is a method of~~
disorder requires repair of at least one of: tissue ~~and/or~~ and bone repair.

Claim 60 (currently amended): The method of claim 59, wherein the cells are ligamentum cells,
tenocytes, chondrocytes, or stromal cells.

Claim 61 (previously presented): The method of claim 59, wherein the method comprises the
regeneration of tissue or the generation of artificial tissue.

Claim 62 (previously presented): The method of claim 59, where the method comprises the
remote activation of ion channels.

Claim 63 (currently amended): The method of claim 59, where the method comprises at least
one of: wound healing ~~and/or~~ and tissue adhesion.

Claim 64 (currently amended): The method of treatment of claim 59 ~~46~~, wherein the method
comprises at least one of: bone repair ~~and/or~~ and bone growth.

Claims 65-68 (cancelled).

Claim 69 (previously presented): The method of claim 46, wherein the magnetic field has a flux

density of 10 mT to 1400 mT.

Claim 70 (cancelled).

Claim 71 (currently amended): The method of claim 46, further comprising administering to the patient a therapeutically active agent simultaneously, separately or sequentially with the magnetisable ~~partiele~~ particles.

Claims 72-153 (cancelled).

Claim 154 (new): A method of treating a patient suffering from a disorder involving an ion channel comprising:

administering to the patient at least one magnetisable particle, wherein the magnetisable particle associates with a cell of the patient; and

manipulating an ion channel of the cell using a magnetic field external to the patient, thereby treating the disorder,

wherein the magnetic field is a constant field or is a variable field with a frequency of 0.1 HZ to 10 Hz, the method comprises repairing tissue or bone, and said cells are ligamentum cells, tenocytes, chondrocytes or stromal cells.

Claim 155 (new): The method of claim 154, wherein said ion channel is TREK.

Claim 156 (new): The method of claim 154, wherein said magnetizable particle is associated with said cell by means of an antibody.

Claim 157 (new): The method of claim 156, wherein said antibody binds to a cellular element selected from the group consisting of: transmembrane extracellular matrix molecules, transmembrane adhesion molecules, dispersed membrane adhesion proteins, and extracellular matrix proteins.

Claim 158 (new): The method of claim 154, wherein the magnetisable particle comprises elemental iron (Fe), or a compound thereof, or a chromium compound, or a combination thereof.

Claim 159 (new): The method of claim 154, wherein the magnetisable particle has a size of 5000 nm or less.

Claim 160 (new): The method of claim 159, wherein the magnetisable particle has a size of from 1 nm to 5000 nm.

Claim 161 (new): A method of regenerating tissue, comprising:
 associating a magnetisable particle with an ion channel of a cell; and
 manipulating said ion channel using a magnetic field,
wherein said cell is a ligamentum cell, tenocyte, chondrocyte or stromal cell.

Claim 162 (new): The method of claim 161, wherein said magnetizable particle is associated with said ion channel by means of an antibody.

Claim 163 (new): The method of claim 162, wherein said antibody binds to a cellular element selected from the group consisting of: transmembrane extracellular matrix molecules, transmembrane adhesion molecules, dispersed membrane adhesion proteins, and extracellular matrix proteins.

Claim 164 (new): The method of claim 161, wherein the magnetisable particle comprises elemental iron (Fe), or a compound thereof, or a chromium compound, or a combination thereof.

Claim 165 (new): The method according to claim 161, wherein the magnetisable particle has a size of 5000 nm or less.

Claim 166 (new): The method according to claim 165, wherein the magnetisable particle has a size of from 1 nm to 5000 nm.

Claim 167 (new): The method of claim 161, wherein said ion channel is TREK.

Claim 168 (new): The method of claim 161, wherein the magnetic field is a constant field or is a variable field with a frequency of 0.1 HZ to 10 Hz.

Claim 169 (new): A method of regenerating cartilage, comprising:

associating a magnetisable particle with a TREK ion channel of a chondrocyte; and
manipulating said ion channel using a magnetic field,

wherein said magnetisable particle is associated with said TREK ion channel by means of an antibody.

Claim 170 (new): The method of claim 169, wherein said antibody binds to a cellular element selected from the group consisting of: transmembrane extracellular matrix molecules, transmembrane adhesion molecules, dispersed membrane adhesion proteins, and extracellular matrix proteins.

Claim 171 (new): The method of claim 169, wherein the magnetic field is a constant field or is a variable field with a frequency of 0.1 HZ to 10 Hz.

Claim 172 (new): The method of claim 169, wherein the magnetisable particle comprises elemental iron (Fe), or a compound thereof, or a chromium compound, or a combination thereof.

Claim 173 (new): The method of claim 169, wherein the magnetisable particle has a size of 5000 nm or less.

Claim 174 (new): The method of claim 169, wherein the magnetisable particle has a size of from

1 nm to 5000 nm.